



United States Steel Corporation  
Environmental Affairs  
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Mark Jeffrey  
Manager  
Environmental Control - Air

January 25, 2010

**VIA E-MAIL**

Mr. Brian H. Dickens, P.E.  
Air & Radiation Division  
U. S. Environmental Protection Agency  
Region 5  
77 W. Jackson Blvd., AE-17J  
Chicago, IL 60604-3590

Dear Brian:

**RE: United States Steel Corporation  
Gary Works, Great Lakes Works, and Granite City Works  
Blast Furnace Visible Emission Observations**

During the recent meeting among United States Steel Corporation (U. S. Steel), U. S. Environmental Protection Agency (USEPA), et al., U. S. Steel indicated that it would like to discontinue the visible emission observation (VEO) program that it has implemented at the above three facilities per USEPA Clean Air Act Section 114 Requests. While the requests would require U. S. Steel to continue taking the readings for a total of 90-days, U. S. Steel believes that the data generated to date is sufficiently representative of the requested blast furnace emissions. The data include readings taken during normal operations, as well as during start-up, shutdown, and malfunction. As you will note while reviewing the attached data, there are dates for which we do not have data for certain furnaces. This is because the furnace was not operating (shutdown) on those dates.

As we previously discussed, the costs associated with implementing the VEO program were anticipated to be great. In fact, they are greater than we expected, and to date, after conducting the program for approximately 60-days, U. S. Steel has expended over \$100,000 to generate the attached data. U. S. Steel believes that continuing the program for approximately another 30-days at such costs is not warranted since the attached data are sufficiently representative of blast furnace operating conditions. With the submittal of these data, U. S. Steel respectfully requests USEPA's approval to shorten the duration of the program and discontinue taking the requested readings. To aid in your review of the attached data, we have prepared and are providing summary sheets for each of the facilities.

Certification statements will accompany a future submittal to Compliance Tracker once the program is discontinued and all data are reviewed and certified. Please note that U. S. Steel continues to take the requested readings until we receive

Brian H. Dickens, P.E.  
United States Environmental Protection Agency  
January 25, 2010  
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USEPA's approval to discontinue the program. Therefore, your prompt attention to this matter is greatly appreciated. I will be contacting you later this week to discuss the attached emission testing results and early termination of the Section 114 Emission Testing program. We would like to complete the requested emissions testing this week with USEPA's approval.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Jeffrey".

Mark Jeffrey  
Manager – Environmental Control, Air

cc: Sabrina Argentieri, Esq. (USEPA)  
David Smiga (USS)  
Tishie Woodwell (USS)  
David Hacker (USS)  
Robert Lange (USS)  
Jill Foust (USS)  
Mark Barnes (USS)

# USEPA 114 Blast Furnace Summaries during Method 9 hours

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GREAT LAKES

20% (6 min) Furnace

Day	Date	Operating Furnace D4 / B2	Bleeders / Explosion Valve Open	Planned or Unplanned	Bleeders / Explosion Time	Bleeder or Explosion Valve Excds	Beaching Metal	Beaching Time	Beached Tons	Beaching Location	Beaching Metal Excds
1	11-19 (Thursday)	None									
2	11-20 (Friday)	None									
3	11-21 (Saturday)	None									
4	11-22 (Sunday)	D4	Explosion Valve	Planned	1100-1128 1138-zero emissions	None 5-15%	None				
5	11-23 (Monday)	D4	Dirty Gas	Planned	1456-1509	None	None				
6	11-24 (Tuesday)	D4					Yes	1116-1122 1204-1213 1302-1413 1424-1429 1552-1700	650 tons	D4 Slag Pit	None 5-30%
7	11-25 (Wednesday)	D4	Explosion Valve	Planned	1356-End of Daylight	None 5-30%	Yes	0800-0822 0910-0942 1043-1115 1155-1235 1319-1335	725 Tons	D4 Slag Pit	21.25% 0807-0812 23.12% 0813-0818 33.54% 0917-0922 70.0% 0923-0928 72.29% 0929-0934 62.70% 0935-0940 26.62% 1044-1049 36.66% 1050-1055 58.33% 1056-1101 49.58% 1102-1107 43.75% 1108-1113

## USEPA 114 Blast Furnace Summaries during Method 9 hours

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Day	Date	Operating Furnace D4 / B2	Bleeders / Explosion Valve Open	Planned or Unplanned	Bleeders / Explosion Time	Bleeder or Explosion Valve Excds	Beaching Metal	Beaching Time	Beached Tons	Beaching Location	Beaching Metal Excds
											33.54% 1200-1205 59.16% 1206-1211 64.37% 1212-1217 75.41% 1218-1223 62.50% 1224-1229 23.75% 1230-1235 27.91% 1325-1330 33.12% 1331-1335
8	11-26 (HOLIDAY)	D4									
9	11-27 (Friday)	D4					None				
10	11-28 (Saturday)	D4	Dirty Gas	Planned	1533-End of daylight	86.25% 1534-1539 69.79% 1540-1545 64.58% 1546-1551 56.66% 1555-1557 60.83% 1558-1603	None				
11	11-29 (Sunday)	D4	Dirty Gas	Planned	0730-1006	None	None				
12	11-30 (Monday)	D4	Dirty Gas	Planned	0730-End of daylight	None	None				
13	12-1 (Tuesday)	D4	Dirty Gas	Planned	07:30-End of daylight	None	None				
14	12-2 (Wednesday)	D4	Dirty Gas	Planned	07:53-10:36	32.29% 07:53-07:58 21.87%	None				

## USEPA 114 Blast Furnace Summaries during Method 9 hours

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Day	Date	Operating Furnace D4 / B2	Bleeders / Explosion Valve Open	Planned or Unplanned	Bleeders / Explosion Time	Bleeder or Explosion Valve Excds	Beaching Metal	Beaching Time	Beached Tons	Beaching Location	Beaching Metal Excds
						08:00-08:05 38.54% 10:03-10:08 41.25% 10:09-10:14 57.50% 10:15-10:20 38.75% 10:21-10:26					
15	12-3 (Thursday)	D4	Dirty Gas	Planned	08:13-10:28	54.16% 08:13-08:18 44.16% 08:19-08:24 35.00% 08:25-08:30 20.62% 08:31-08:36	None				
16	12-4 (Friday)	D4					None				
17	12-5 (Saturday)	D4					None				
18	12-6 (Sunday)	D4					None				
19	12-7 (Monday)	D4					None				
20	12-8 (Tuesday)	D4					None				
21	12-9 (Wednesday)	D4					None				
22	12-10 (Thursday)	D4					None				
23	12-11 (Friday)	D4					None				
24	12-12 (Saturday)	D4	Dirty Gas	Planned	14:08-14:15	None	None				
25	12-13 (Sunday)	D4					None				
26	12-14 (Monday)	D4					None				
27	12-15 (Tuesday)	D4	Dirty Gas	Planned	08:00-16:50	None	None				
28	12-16 (Wednesday)	D4					None				
29	12-17 (Thursday)	D4					None				
30	12-18 (Friday)	D4					None				
31	12-19 (Saturday)	D4					None				
32	12-20 (Sunday)	D4					None				
33	12-21 (Monday)	D4					None				
34	12-22 (Tuesday)	D4	Dirty Gas	Planned	11:06-13:51	None	None				

## USEPA 114 Blast Furnace Summaries during Method 9 hours

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Day	Date	Operating Furnace D4 / B2	Bleeders / Explosion Valve Open	Planned or Unplanned	Bleeders / Explosion Time	Bleeder or Explosion Valve Excds	Beaching Metal	Beaching Time	Beached Tons	Beaching Location	Beaching Metal Excds
35	12-23 (Wednesday)	D4	Dirty Gas	Planned	09:55-10:20	None	None				
36	12-24 (Holiday)	D4									
37	12-25 (Holiday)	D4									
38	12-26 (Saturday)	D4 / B2	Dirty Gas (B2)	Planned	08:00-11:08	22.08% 10:35-11:00 24.38% 11:01-11:06	None				
39	12-27 (Sunday)	D4 / B2					Yes B2	08:09-08:37 10:22-10:59 12:27-12:57 14:15-14:56 16:00-16:30	400 Tons	B2 Slag Pit	None 5-10%
40	12-28 (Monday)	D4 / B2	Dirty Gas (B2)	Planned	08:18-12:16	None	Yes B2	08:00-08:29	100 Tons	B2 Slag Pit	None 5-15%
41	12-29 (Tuesday)	D4 / B2	Dirty Gas (D4)	Planned	10:03-14:49	None	None				
42	12-30 (Wednesday)	D4 / B2					None				
43	12-31 (Thursday)	D4 / B2					None				
44	1-1-10 (Holiday)	D4 / B2									
45	1-2 (Saturday)	D4 / B2					None				
46	1-3 (Sunday)	D4 / B2	Dirty Gas (D4)	Planned	08:00-10:05	None	None				
47	1-4 (Monday)	D4 / B2	Dirty Gas (B2)	Planned	12:05-17:15	None	None				
48	1-5 (Tuesday)	D4 / B2	Explosion & Dirty Gas (B2)	Planned	14:49-14:51 14:59-16:25 15:00-16:41	None	None				
49	1-6 (Wednesday)	D4	Dirty Gas (D4)	Planned	16:27-16:36	45.00% 16:27-16:32	None				
		B2	Explosion & Dirty Gas (B2)	Planned & Un-planned	16:04-16:10 16:38-16:43	None	None				
50	1-7 (Thursday)	D4 / B2	Dirty Gas (D4)	Planned	08:08-15:05	None	None				
51	1-8 (Friday)	D4 / B2	Dirty Gas (D4)	Planned	08:49-15:01	None	None				

## USEPA 114 Blast Furnace Summaries during Method 9 hours

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Day	Date	Operating Furnace D4 / B2	Bleeders / Explosion Valve Open	Planned or Unplanned	Bleeders / Explosion Time	Bleeder or Explosion Valve Excds	Beaching Metal	Beaching Time	Beached Tons	Beaching Location	Beaching Metal Excds
52	1-9 (Saturday)	D4 / B2	Dirty Gas (B2)	Planned	10:48-End of Daylight	None	None				
53	1-10 (Sunday)	D4 / B2	Dirty Gas (D4) Leaking	Planned Un-planned	08:00-08:50 09:48-10:28 10:30-10:55	None	None				
54	1-11 (Monday)	D4 / B2	Explosion & Dirty Gas (B2)	Planned Un-planned	11:06-11:06 12:18-12:19 12:59-15:09	None	None				
55	1-12 (Tuesday)	D4 / B2	Explosion & Dirty Gas (B2)	Un-Planned	11:33-11:42 15:42-15:53 17:27-End of Daylight	None	None				
56	1-13 (Wednesday)	D4	Dirty Gas (D4) Leaking	Un-planned	16:39-17:25	None	None				
		B2	Dirty Gas (B2) Leaking	Un-planned	08:06-08:14 13:35-15:25	None	None				
57	1-14 (Thursday)	D4	Dirty Gas (D4) Leaking	Un-planned	08:03-12:03	None	None				
		B2	Dirty Gas (B2) Leaking	Un-planned	08:00-08:07	None	None				
58	1-15 (Friday)	D4 / B2	Dirty Gas (B2) Leaking	Un-planned	08:00-08:07	None	None				
59	1-16 (Saturday)	D4 / B2	Dirty Gas (B2) Leaking	Un-planned	08:00-17:20	27.29% 09:10-09:15 20.83% 09:30-09:35	None				
60											
61											

## USEPA 114 Blast Furnace Summaries during Method 9 hours

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Day	Date	Operating Furnace D4 / B2	Bleeders / Explosion Valve Open	Planned or Unplanned	Bleeders / Explosion Time	Bleeder or Explosion Valve Excds	Beaching Metal	Beaching Time	Beached Tons	Beaching Location	Beaching Metal Excds
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
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88											
89											
90											



U. S. Steel  
Gary Works  
USEPA 114 Request  
Blast Furnace Readings

68-10-3(a)  
misc. CHARGES  
Gary 202 3 min Avg or 20242 OF EMISSION

Date	Tops, EV, Bells	Dirty Bleeders (6 min avg)
11/19/09	3 series of observations – all 0%	#6 BF planned bleeder – (0%)
11/20/09	3 series of observations – all 0%	#6 BF unplanned bleeder – (0%)
11/21/09	3 series of observations – all 0% Method 9 on #4 BF top 5-20%	
11/22/09	3 series of observations – all 0%	#8 BF planned bleeder (0%)
11/23/09	3 series of observations – all 0% Method 9 on #4 BF top 5-20%	
11/24/09	3 series of observations – all 0% Method 9 on #4 top 5-20%	#4 BF unplanned bleeder (0%)
11/25/09	3 series of observations – all 0%	
11/26/09	Holiday	
11/27/09	Holiday	
11/28/09	3 series of observations – all 0%	
11/29/09	3 series of observations – all 0%	#8 BF planned bleeder (0%) #6 BF planned bleeder (0%)
11/30/09	3 series of observations – all 0%	#8 BF planned bleeder (0%)
12/01/09	3 series of observations – all 0%	#14 BF planned bleeder (0%)
12/02/09	3 series of observations – all 0%	
12/03/09	3 series of observations – all 0%	#8 BF planned bleeder (0%) #8 BF planned bleeder (0%) Iron Beaching see sheet 5%
12/04/09	3 series of observations – all 0%	#14 BF planned bleeder (0%)
12/05/09	3 series of observations – all 0%	
12/06/09	3 series of observations – all 0%	

12/07/09	3 series of observations – all 0%	#8 BF planned bleeder (0%)
12/08/09	3 series of observations – all 0%	#6 BF planned bleeder (0%) #6 BF planned bleeder (0%)
12/09/09	3 series of observations – all 0%	
12/10/09	3 series of observations – all 0%	#4 BF planned bleeder (0%) #4 BF planned bleeder (0%) #8 BF unplanned bleeder (0%) Iron Beaching (0%)
12/11/09	3 series of observations – all 0%	Iron Beaching (0%)
12/12/09	3 series of observations – all 0%	#4 BF unplanned bleeder (0%) #6 BF unplanned bleeder (0%)
12/13/09	3 series of observations – all 0%	#4 BF unplanned bleeder (0%) #6 BF unplanned bleeder (0%) #8 BF planned bleeder (0%)
12/14/09	3 series of observations – all 0%	#14 BF planned bleeder (0%) #4 BF unplanned bleeder (0%) #4 BF planned bleeder (0%) Iron Beaching 30. % over min
12/15/09	3 series of observations – all 0%	#4 BF unplanned bleeder (0%) #14 BF planned (0%) #6 BF unplanned (0%) #4 BF top Method 9 24% over 2.25 min #4 BF planned bleeder (0%) 22% over 3 min #14 BF Iron beaching (0%)
12/16/09	3 series of observations – all 0%	#4 BF planned bleeder (0%) #14 BF planned bleeder (0%) Iron Beaching (0%) 5-30% no violation
12/17/09	3 series of observations – all 0%	#4 BF planned bleeder (0%) #14 BF planned bleeder (0%)
12/18/09	3 series of observations – all 0%	#4 BF planned bleeder (0%)

		#6 BF Top Method 9 (6.2%) 5-10% No Variation
12/19/09	3 series of observations – all 0%	#14 BF planned bleeder (0%)
12/20/09	3 series of observations – all 0%	#14 BF planned bleeder (0%)
12/21/09	3 series of observations – all 0%	#14 BF planned bleeder (0%) #4 BF unplanned bleeder (0%)
12/22/09	3 series of observations – all 0%	#4 BF planned bleeder (0%)
12/23/09	3 series of observations – all 0%	
12/24/09	Holiday	
12/25/09	Holiday	
12/26/09	3 series of observations – all 0%	#8 BF planned bleeder (0%) Iron Beaching 5% No Variation
12/27/09	3 series of observations – all 0%	
12/28/09	3 series of observations – all 0%	#6 BF planned bleeder (0%) #6 BF planned bleeder (0%)
12/29/09	3 series of observations – all 0%	
12/30/09	3 series of observations – all 0%	
12/31/09	3 series of observations – all 0%	
01/01/10	3 series of observations – all 0%	
01/02/10	3 series of observations – all 0%	#8 BF planned bleeder (0%)
01/03/10	3 series of observations – all 0%	
01/04/10	3 series of observations – all 0%	#4 BF unplanned bleeder (0%)
01/05/10	3 series of observations – all 0%	#4 BF planned bleeder (0%) #4 BF unplanned bleeder (0%) #4 BF Top Method 5-7% No Variation
01/06/10	3 series of observations – all 0%	
01/07/10	3 series of observations – all 0%	#8 BF planned bleeder (0%)
01/08/10	3 series of observations – all 0%	
01/09/10	3 series of observations – all 0%	
01/10/10	3 series of observations – all 0%	
01/11/10	3 series of observations – all 0%	

01/12/10	3 series of observations – all 0%	#4 BF unplanned bleeder 20% 75% 100% No Uter.
01/13/10	3 series of observations – all 0%	
01/14/10	3 series of observations – all 0%	#6 BF planned bleeder 0%
01/15/10	3 series of observations – all 0%	
01/16/10	3 series of observations – all 0%	#8 planned bleeder (0%)

STANDARD

First 8 min - 60%

Rest 30% 6 min

U. S. Steel  
Granite City Works  
USEPA 114 Request  
Blast Furnace Readings

Date	Tops, EV, Bells	Dirty Bleeders (6 min avg)
11/20/09	4 (12 min) - all at 0%	08:45 - 6.67% - planned 11:49 - 7.29% - planned
11/21/09	3 (9 min) - all at 0%	None
11/22/09	3 (9 min) - all at 0%	None
11/23/09	3 (9 min) - all at 0%	None
11/24/09	3 (9 min) - all at 0%	None
11/25/09	3 (9 min) - all at 0%	None
11/26/09	Holiday	
11/27/09	Holiday	
11/28/09	3 (9 min) - all at 0%	None
11/29/09	3 (9 min) - all at 0%	None
11/30/09	3 (9 min) - all at 0%	None
12/01/09	3 (9 min) - all at 0%	None
12/02/09	3 (9 min) - all at 0%	10:13 - 9.38% - planned 13:32 - 5.42% (planned)
12/03/09	3 (9 min) - all at 0%	None
12/04/09	3 (9 min) - all at 0%	None
12/05/09	3 (9 min) - all at 0%	None
12/06/09	3 (9 min) - all at 0%	None
12/07/09	3 (9 min) - all at 0%	None
12/08/09	3 (9 min) - all at 0%	None
12/09/09	2 (6 min) - all at 0%	07:30 - 0% (planned) 14:06 - 12.5% (planned)
12/10/09	3 (9 min) - all at 0%	None

12/11/09	3 (9 min) – all at 0%	None
12/12/09	3 (9 min) – all at 0%	None
12/13/09	3 (9 min) – all at 0%	None
12/14/09	3 (9 min) – all at 0%	None
12/15/09	3 (9 min) – all at 0%	08:05 – 3.33% (unplanned)
12/16/09	3 (9 min) – all at 0%	None
12/17/09	3 (9 min) – all at 0%	None
12/18/09	3 (9 min) – all at 0%	None
12/19/09	3 (9 min) – all at 0%	None
12/20/09	3 (9 min) – all at 0%	None
12/21/09	2 (6 min) – all at 0%	8:44 – 12.50% (planned) 9:16-9:29 – 13.33% (planned) 11:10-11:15 – 13.13% (planned)
12/23/09	3 (9 min) – all at 0%	None
12/23/09	3 (9 min) – all at 0%	None
12/24/09	No Observations - Holiday	
12/25/09	No Observations - Holiday	
12/26/09(Be gan 2 Furnace Oper.)	6 (18 min) – all at 0%	None
12/27/09	6 (18 min) – all at 0%	None
12/28/09	6 (18 min) – all at 0%	None
12/29/09	6 (18 min) – all at 0%	None
12/30/09	6 (18 min) – all at 0%	None
12/31/09	6 (18 min) – all at 0%	None
01/01/10	No Observations - Holiday	
01/02/10	6 (18 min) – all at 0%	None
01/03/10	6 (18 min) – all at 0%	None
01/04/10	6 (18 min) – all at 0%	None

01/05/10	6 (18 min) – all at 0%	None
01/06/10	6 (18 min) – all at 0%	None
01/07/10	6 (18 min) – all at 0%	None
01/08/10	6 (18 min) – all at 0%	14:05 – 0% planned
01/09/10	6 (18 min) – all at 0%	11:41 – 2.29% planned
01/10/10	6 (18 min) – all at 0%	None
01/11/10	6 (18 min) – all at 0%	7:19 (B) – 0% 8:05 (B) – 0%
01/12/10	6 (18 min) – all at 0%	7:18 (B) – 0% 11:18 (B) – 0% 15:18 (B) – 0%
01/13/10	6 (18 min) – all at 0%	None
01/14/10	6 (18 min) – all at 0%	12:22 – 0% planned

## Beaching

Date	Material	Cause	Location	Quantity	Method 9 – *
12/09/09	Slag	B Furnace Shutdown	Dekish/Gantry	3 T	3.44% (4 min)
12/09/09	Slag	B Furnace Shutdown	Dekish/Gantry	2 T	2.5% (3 min)
12/09/09	Slag	B Furnace Shutdown	Dekish/Gantry	5 T	10% (2 min)
12/28/09	Slag and Iron	A Furnace Start	Dekish/Gantry	50 T	7.71% (6 min)
12/28/09	Slag and Iron	A Furnace Start	Dekish/Gantry	50 T	1.82% (2.75 min)
12/28/09	Slag and Iron	A Furnace Start	Dekish/Gantry	50 T	19.0% (2.5 min)
12/28/09	Slag and Iron	A Furnace Start	Dekish/Gantry	30 T	2.50% (3.5 min)
12/29/09	Slag and Iron	A Furnace Start	Dekish/Gantry	30 T	0% (6 min)
12/29/09	Slag and Iron	A Furnace Start	Dekish/Gantry	20 T	4.58% (6 min)
12/30/09	Slag and Iron	A Furnace Start	Dekish/Gantry	80 T	5.21% (6 min)
01/05/10	Slag	B Furnace Shutdown	Dekish/Gantry	2.5 T	3% (5 min)

\*If actual pour time was less than six minutes then actual time used to calculate opacity. If pour time exceeded six minutes, then opacity reported as a six minute average.